City of Dover, NH Comments on draft 2013 NH MS4 Permit

The City of Dover and numerous other NH communities have engaged the law firm of Sheehan, Phinney, Bass and Green to prepare comments to the draft 2013 NH MS4 Permit on our behalf. The comments prepared by Sheehan, Phinney, Bass and Green are incorporated into the City of Dover's comments by reference.

In addition to the comments submitted by Sheehan, Phinney, Bass and Green of behalf of the City of Dover and other NH MS4 communities, the City of Dover has the following additional comments:

Upon review of all the requirements in the draft2013 NH MS4 permit and charting them onto a time line, two things become abundantly clear. First, that in general all of the requirements in the proposed permit will not be able to be accomplished in the five year permit period. It is unlikely that even within 20 years everything needed to meet water quality standards will be accomplished. Second the permit is heavily front loaded with tasks that the City has neither the staff nor financial resources to accomplish as the permit requires.

While improving water quality in our water bodies is a community priority, it must be put in perspective of other community responsibilities and priorities. It is easy to assume a community can afford more spending to protect the environment when looking solely at a community's median household income. However, this is too simplistic of an analysis which is insensitive to the current dynamics associated with the Federal and State programs which are mandated and which previously were subsidized by the Federal and State funds. As the Federal and State funding has dried up not just for environmental programs but all federally subsidized programs, the local communities have been scaling back on local programs and staff in order to make up for the loss of Federal and State funding of the mandated programs. Despite the belt tightening at the local level, the down shifting of mandated program costs have pushed local property taxes higher.

EPA needs to recognize that improving water quality in our water bodies is important but it needs to be accomplished in a financially sustainable way. Region One EPA Administrator Spaulding himself acknowledged at a presentation in Stratham last spring, that "EPA cannot save Great Bay. It is up to the local communities to save it." EPA must recognize and acknowledge that communities have done a great deal already and that communities are willing to continue doing even more, but it must be at a sustainable level.

Section 2.1.2.b.iii New or Increased Discharges to Impaired Waters

This provision states that there is no net increase in loading allowed from an MS4 to impaired waters of any pollutant for which water body is impaired. EPA presumes that the MS4 is causing and or contributing to an impairment. It is Dover's understanding that EPA is not entitled to make that presumption.

A large portion of the City of Dover discharges storm water to the tidal portion of the Cocheco, Piscataqua, and Bellamy Rivers which are listed as impaired for numerous contaminants including nitrogen. While proposed new development can install best management practices to reduce nitrogen, the BMP's are not 100% efficient and the resultant development would increase nitrogen loading and therefore not be approved. This proposed section is overly restrictive and would cripple the City's ability to grow and generate additional revenue that would support water quality improvements.

Section 2.2.2 Discharge to impaired water without an approved TMDL

The tidal portion of the Cocheco River is impaired for numerous PAH's. Section 2.2.2 would require the City to develop a plan to reduce PAH's from its MS4 under the presumption it is a significant source contributing to the impairment.

It is safe to say that Dover's stormwater runoff has no higher a concentration of PAH's than the City of Rochester's stormwater. However, the tidal portion of the Cocheco River is impaired for PAH's while the Cocheco River down stream of Rochester is not impaired for PAH's. Section 2.2.2 of the proposed permit will require Dover to sample all its' outfalls as the permit assumes that the MS4 outfalls are significant sources while ignoring the fact that a former coal gasification plant that operated for more than 100 years on the banks of the Cocheco River was located near the downtown Dover and has been identified as a hazardous waste site by NHDES Waste Management Bureau.

In 2003 and 2004 a remedial clean up was conducted at the former coal gasification site which included an environmental river dredge in the Cocheco River. This site is obviously the primary source of PAH's in the Cocheco and Piscataqua Rivers. To require all Dover storm drains discharging to the tidal Piscataqua, Cocheco and Bellamy Rivers to sample for PAH's and develop Water

Quality Response Plans (WQRP) to reduce PAH's from stormwater is unnecessary, expensive and un-protective. This one example illustrates the unfair burden that the proposed permit places on the MS4's, which requires them to address water quality issues where the MS4's are clearly not the source of the impairment. EPA and NHDES should determine the primary sources of the impairments, and not assume that the MS4's are the source and require the MS4 to prove they are not the source of the impairment. The tidal rivers are also impaired for DDD, DDE, DDT, PCB, dioxin and other legacy compounds which were discharged years ago. Just sampling for these compounds will be very costly for the MS4. Sampling for the above mentioned legacy compounds including PAH's would be $880 per sample for each outfall.

Section 2.1.1.c Requirement to Meet Water Quality Standards

This provision states that within 60 days of determining that a discharge causes or contributes to an exceedance of applicable water quality standards, the MS4 must eliminate the source or if it can't be eliminated in 60 days prepare a WQRP.

Dover has 20 years of experience identifying and eliminating illicit discharges from the storm water system. It will be impossible to comply with this provision within 60 days. Most illicit discharges are sewer services erroneously connect to the storm system. Many of the connections are difficult to locate and once found the remediation often requires easements from private parties, utility conflicts and often require considerable time to complete the process. The 60 day requirement is not usually possible and the MS4 should not have to prepare a plan explaining why it hasn't completed the correction and what it intends to do to resolve the problem. Simply make it a requirement of the annual report when a violation is found, what the MS4 has done to resolve the situation, and intends to do during the coming year if not resolved. Preparing a WQRP is a waste of effort and won't get the problem resolved any more quickly.

In the case of nitrogen the NHDES denies that it has adopted a numeric water quality standard despite establishing a threshold value of 0.3 mg/l in stream TN concentration for the tidal rivers which NHDES uses in the NH Consolidated Assessment and Listing Methodology to determine whether a water body is

impaired for nitrogen**. If 0.3 mg/l is not a water quality standard then what is the target value that MS4 communities should use to determine if a discharge is causing or contributing to the nitrogen impairment?**

Considering the fact that Dover and other communities have challenged the analysis that NHDES used in the 2009 Numeric Nutrient Criteria document to establish 0.3 mg/l TN as the in stream threshold based on the premise that elevated nitrogen concentrations have caused excessive phytoplankton growth in the water column which reduces light transparency and is adversely impacting eelgrass in the Great Bay estuary.

Dover and other communities have provided NHDES and EPA with numerous documents and affidavits that show NHDES knew that chlorophyll a levels, the measure of suspended algae particles in the water column, has not increased in 30 years and that reducing nitrogen would not improve transparency sufficiently to meet target transparency levels for eelgrass. (Appendix A Deposition Excerpts at page 1 excerpt 2; page 4 excerpt 11; and page 5 excerpt 12)

Two prominent UNH research professors, Drs. Jones and Langan who have worked in the Great Bay estuary for more than 20 years indicated in a response letter to the Mayors of Portsmouth, Dover, and Rochester, that no research has been conducted in the Great Bay estuary that shows nitrogen is the cause of eelgrass loss anywhere in the estuary. (Exhibit 2 Letter from Mayors, at page 5, #2 and #3; and Exhibit 3 Letter from Jones and Langan, at page 3, #2 and #3)

Dr Steven Chapra of Tufts University a highly regarded expert prepared a review of the 2009 Nutrient Criteria document and concluded that the 2009 NHDES Nutrient Criteria document was fundamentally flawed and produced incorrect results. (Exhibit 1 at page 2 and page 15)

NHDES recently agreed to conduct an independent peer review cooperatively with the cities of Dover, Portsmouth, and Rochester. The peer review of the 2009 Numeric Nutrient Criteria document will be conducted by a panel of independent experts in the fall of 2013 and will consider the methodology, analysis, and conclusions in the 2009 document as well as all the available data and pertinent research not included in the NHDES analysis.

EPA should withdraw the nitrogen requirements from Appendix H of the draft MS 4 permit until such time that an appropriate nitrogen water quality threshold is determined. It should also be noted that the communities have submitted comment to NHDES on the 2012 303(d) listing objecting to the proposed nitrogen impairment listings.

Chloride

The City of Dover recognizes the chloride issue and appreciates EPA's concern. Dover derives its drinking water from groundwater in glacial outwash deposits which are susceptible to chloride contamination, and agrees that road salt used during winter operations on public roads and private properties are the primary source. The balance between public safety and environmental protection are at odds on the issue but have not been ignored by MS4's. Community winter operations are a significant public works budget item. Mangers are keenly aware of salt use from a cost perspective as well. Dover and other communities have implemented automated equipment to uniformly lay down salt which adjusts to vehicle speed, and the staff is trained in appropriate use of deicing agents. We agree that a private sector salt use accounting program will have educational value to independent contractors and property owners and have a positive benefit. Dover believes it makes sense for an MS4 to report salt use on an annual basis from year to year, the proposed tracking requirements in the draft permit are overly burdensome and will not produce any benefit. Each winter season and each winter storm is unique. The natural variability in winter weather from storm to storm, and year to year will make the proposed data reported impossible to make any sense of. Storm intensity varies widely by geography as well. As an example a winter storm in Dover frequently has snow in north Dover, sleet and ice in central Dover and all rain on Dover Point, which the storm may be all snow in Rochester.

Winter operations utilize different techniques based on type of precipitation and temperatures. Sunny days and cold nights create melting in the day followed by refreezing at night requiring salting operations even though there was no storm. Dover suggests that the permit reduce the reporting to a simple annual salt use by weight as a way to judge effectiveness over the long run. Staff training, investment in state of the art equipment and educating public regarding appropriate

driving during winter are the most important factors that will produce desired lower salt use.

Illicit Discharge Detection and Elimination

The proposed schedule for completion of an IDDE work is unreasonable. Dover has an extensive and old storm drainage system. Much IDDE work has been completed in Dover over the last 20 years with numerous illicit connections removed. Much of the work was done with NHDES staff long before the first MS4 permit. NHDES chose to work with Dover on their IDDE pilot program because of the cooperative local staff and their commitment to protect local water resources. As a result most of Dover's illicit connections have been identified and removed. Consequently requiring a community like Dover who has already committed significant resources to address the IDDE problem to sample every outfall during the permit is redundant and does not acknowledge the fine work already completed. Communities should be given the flexibility to propose the level of effort needed to appropriately address the IDDE issue in their community. Requiring sampling of every discharge location regardless of past work is not productive or helpful in attaining the water quality improvements by wasting resources.

It is completely unjustified and unworkable that upon discovery of a potential illicit connection that the MS4 is in immediate non-compliance and potentially subject to fines from the moment of discovery. EPA needs to establish a fair and reasonable standard to determine that a MS4 is proceeding expeditiously to resolve a violation.

Dover has been committed and will continue to be committed to detecting and removing illicit connections from its MS4. The city can increase its level of effort in IDDE in the new permit but will need to balance and prioritize the IDDE work with the other new requirements in the permit.

Good Housekeeping

Dover has been cleaning every catch basin once every two years. The results have been incredibly beneficial. Portions of the system that would back up during rain events causing staff to respond to street flooding have virtually disappeared. With

clean sumps and now clean pipes water is flowing and sumps are trapping contaminant bearing sediment and debris.

There is no doubt that water quality discharging the MS4 has improved during the last 10 years of the MS4 permit. Dover does not plan on utilizing the proposed 50% sump capacity threshold to clean basins. It will continue to clean basins every two years because of the beneficial effect City staff has seen. This methodology has proven to be as effective as necessary.

2.2.2

While Dover agrees that an iterative approach is appropriate the draft permit attempt to require analysis, implementation, and reanalysis within the 5 year permit is unnecessary and unworkable. The schedule is too compressed and the proposed tracking and reporting in the 3 phase approach is too extensive.

Dover cannot possibly assess, propose BMP's, implement structural BMP's and collect meaningful data to assess effectiveness of BMP's then propose modifications to plans all in the 5 years of the permit.

The city has nearly completed stormwater improvements in the Berry Brook watershed. Berry Brook is a small urbanized sub watershed of the Cocheco River about 165 acres in size that had 30% impervious cover at the beginning of the project in 2003. By the end of 2013, it is projected that through implementing green infrastructure drainage improvements that Berry Brook will have disconnected enough impervious area to result in a 10% effective impervious area. The cost to do that work is over one million dollars. Water quality monitoring has shown mixed results but the trend appears to be improving. The UNH Stormwater Center, Dover's project partner, expects that it will take time for the improvements in water quality to be measurable. Based on our experience in Berry Brook it is unreasonable to have such short schedules to complete the 3 phase approach as proposed in the draft MS4 permit. It has taken a ten year period to assess, plan and implement improvements in the Beery Brook watershed and the results are inconclusive as to water quality improvements. It would be premature to propose modifications or additional BMP's until the additional water quality data has been collected and analyzed. This is presented in the comments to illustrate the

unreasonableness of the 3 phase approach schedule and reporting within the 5 year permit.

Impairment Listings

Many of the current impairment listings in Dover are based on the data that in some cases are older and in other cases are only one or two samples. A number of listings are based on the data collected during 2006, during years in which precipitation was at the highest levels ever recorded.(see annual precipitation record chart obtained from NOAA database) During this type of weather, bacteria levels spike as a result of non point run off. It would be prudent to sample these segments during more representative rainfall conditions to determine whether the stream is really impaired.

EXAMPLES:

-Indian Brook Bact. 3 Samples 2006, 1 sample in 2007.

-Varney Brook: no new data - City abandoned, leaking sewer force main and obvious major bacteria source and removed one illicit discharge to storm system in the watershed.

-Garrison Brook: no new bacteria data

-Cocheco River 608-04: IDDE removals and recent calculated geometric means of 27 ct/100ml bacteria suggest this segment may no longer be impaired for bacteria

-Bellamy River @ Sawyers Mill: numerous samples and calculated geometric means for bacteria between 2003 and 2007 suggest this segment is not impaired. One sample in September 2002 had high bacteria counts/. A significant cross connection was radiated where a leaky clay sewer main was draining into a near by storm drain line.

- Bellamy 903-09: no new data –a significant multi year Inflow and Infiltration remediation project which included sealing sewer manholes, relining and

replacing leaking sewer mains has been completed which may have improved water quality enough to warrant delisting and should be sampled.

As some of the impairment listed sites relying on the older data remedial activities have taken place which could have improved water quality resulting in potentially delisting the stream segment. The City of Dover proposes that initial efforts focus on segments where available data is sufficient and current to support the impairment listings. For the segments where there is a lack of sufficient and current data, or where remedial work may have improved water quality to delist a water body, Dover suggests that the MS4 communities and NHDES work cooperatively to review the suspect listing by collecting additional sampling data in the proposed permit period before expending resources that will be needed in known problem areas.

Permit Tracking and Reporting Requirements

The draft permit has extensive tracking and reporting for nearly every required action many of which are redundant as they will be included as part of annual reporting. Please review these requirements and make an effort to consolidate the reporting within the annual report.

As an example there is a statewide bacteria TMDL for impaired waters in NH and that the proposed MS4 permit has extensive IDDE requirements and an aggressive implementation schedule. A primary source of bacteria in MS4's is from illicit sewer connections which is also a source of nitrogen and other contaminants. The permit requires Dover and other MS4's in the Great Bay watershed to sample for nitrogen as well as other contaminants and to develop plans to reduce the contaminants while at the same time requiring IDDE plans on the same MS4 system both of which require detailed reporting much of which is redundant, burdensome, a waste of resources and non productive.

A simpler integrated approach should allow for each community to identify and track the contaminants of concern in their systems based on impairments as part of their IDDE program.